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An Annotated Bibliography of the Sandhill Cutworm

Euxoa detersa (Walker)

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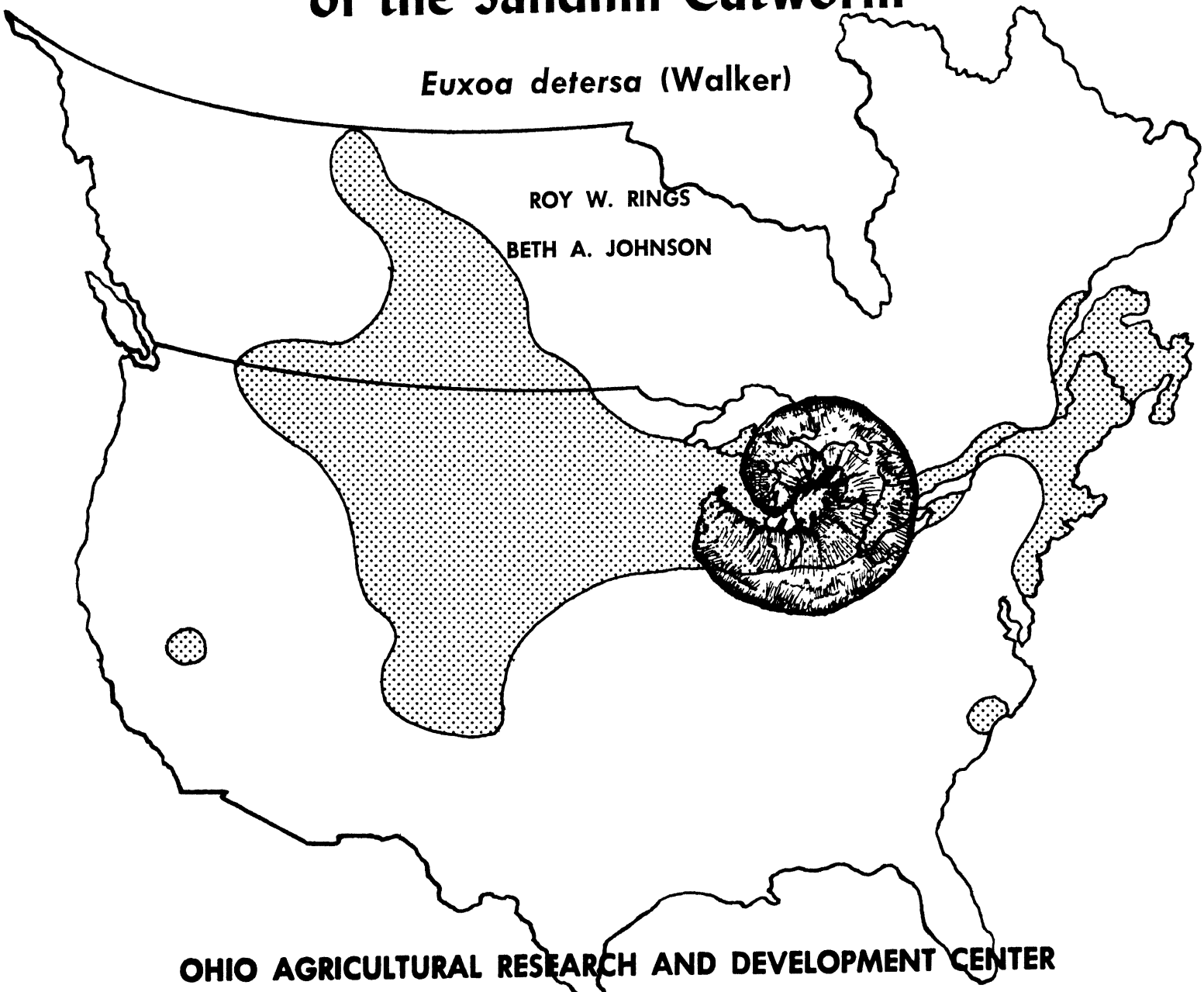

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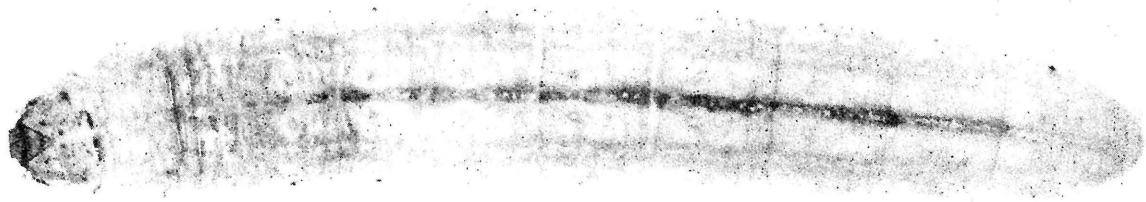

Dorsal view of Sandhill Cutworm

AN ANNOTATED BIBLIOGRAPHY OF THE SANDHILL CUTWORM, *Euxoa detersa* (Walker)

Roy W. Rings[1] and Beth A. Johnson[2]

Introduction

The purpose of this circular is to consolidate the abstracted literature on the sandhill cutworm, *Euxoa detersa* (Walker). The publication brings together research and extension information on developmental biology, ecology, geographical and seasonal distribution, and control for pest management purposes, since most faunal lists, museum lists, and checklists cannot be abstracted for the recovery of a single species.

The species was originally described as *Charaeas detersa* by Francis Walker in 1856 from specimens collected by Lt. Redman in Nova Scotia. The type specimens, both male and female, are in the British Museum. Grote, independently, described the species as *Agrotis pitychrous* in 1873. Also independently, Morrison assigned the name *Agrotis personata* to the sandhill cutworm in 1876 and Strecker described it as *Agrotis azif* in 1898. Hampson placed the species in the genus *Euxoa* in 1903.[3]

The sandhill cutworm ranges from Nova Scotia and Quebec to Washington and south to South Carolina and Colorado. Its distribution seems to be limited to sandy soils known as sand barrens or blown sand.

The fully grown larva of *Euxoa detersa* is semi-translucent whitish, with white dorsal, subdorsal, lateral, and stigmatal stripes. The head and cervical shield are shiny pale brown. The larva was first described by Beutenmüller in 1889. Because of the unpigmented condition of the larval epidermis, this cutworm presents a good opportunity for observing the pulsations of the dorsal blood vessel (Whelan 1938). The moth is described in detail by Forbes (1954) and is illustrated in color by Holland (1934).

The species is not of general economic importance in the United States, but is important locally as a corn pest in Illinois and Nebraska. In Ontario it has been an important pest of flue-cured tobacco and in certain areas has apparently developed a cyclodiene-resistant strain after 4 or more years of selection pressure (Begg 1963). In addition to corn and tobacco, it has also been recorded as an injurious species on peas, mangoes, melons, oats, onions, potatoes, rape, raspberry, rye, strawberries, sweet clover, and wheat.

The bibliographical information was obtained by a search of the libraries at The Ohio State University and the Ohio Agricultural Research and Development Center for the years 1864 to 1974. The authors have established a current awareness profile on the sandhill cutworm in cooperation with the Mechanized Information Center of

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[3] The authors appreciate the assistance of Dr. J. D. Lafontaine of the Biosystematics Research Institute, Research Branch, Canada Department of Agriculture, Ottawa, Ontario, in providing taxonomic literature.

The Ohio State University Libraries. This computerized system of retrieval will aid in keeping this bibliographical information current. Supplementary bibliographical data on sandhill cutworm will be summarized at yearly intervals and will be available on request from the Ohio Agricultural Research and Development Center.

The preparation of this bibliography is part of an extensive, multi-state research program supported by grants from the Cooperative State Research Service and the federal Environmental Protection Agency. This is a regional research project entitled "Bionomics and Management of Soil Arthropod Pests."

Entries are listed alphabetically by author except in cases where the publication is anonymous or more likely to be identified with the governmental agency under which it was published. The abbreviations in the citations follow the American standard for periodical title abbreviations which was published in Biological Abstracts, 45(13):4347-4361. All references in this publication deal with *Euxoa detersa* (Walker); however, the scientific name used in the original article is also used in the annotation so there is no question as to the species being cited. The name in current usage is also given in the annotation unless it is in quotes. The numbers in parentheses following the annotation represent the page numbers which include information on the sandhill cutworm if they are different from the citation page numbers.

Bibliography

Anonymous. 1938. Insect Pests. Wisconsin Agr. Exp. Sta. Bull. 440:1-91.
Euxoa personata (= *detersa*) is subterranean in habit and causes severe crop damage in June. Only four species of cutworms were abundant enough to cause serious damage in Wisconsin. The sandhill cutworm *Euxoa personata* (= *detersa*) comprised 11% of the total number of cutworms found at Hancock, Wis. (20)

Apgar, A. C., J. B. Smith and W. H. Werner. 1910. The insects of New Jersey. Annu. Rep. N. J. State Mus. 1909:455.
"*E. detersa* Wlk. Throughout the State in late fall on goldenrod, flying freely in the bright sunshine, especially common near the shore."

Arnott, D. A. and H. W. Goble. 1943. The value of molasses-free baits in the control of cutworms in tobacco fields. 73rd Rep. Entomol. Soc. Ont.:1-71.
Euxoa detersa var. *personata* Morr. was one of the species of cutworms found in a field in Delhi, Ont. (31)

Begg, J. A. 1963. Chemical control of the sandhill cutworm, *Euxoa detersa* (Wlk.), in flue-cured tobacco. Pesticide Progr., 1(5):150-153.
In Norfolk County, Ontario, the sandhill cutworm, *Euxoa detersa* (Wlk.), apparently developed a cyclodiene-resistant strain after 4 years of selection pressure in flue-cured tobacco soils. Preplanting soil treatments of DDT, anti-resistant-DDT, and Telodrin afforded appreciable control. Diazinon was effective only against small larvae. The following insecticides at the rates tested gave insufficient or no control: endrin, Thiodan, lindane, Dylox, Guthion, Bayer 44646, Sevin, Zectran, and Bayer 39007. Under field conditions, at least 4 lb. of DDT per acre were required to adequately control the sandhill cutworm attacking flue-cured tobacco.

Beutenmüller, W. 1889. Descriptions of some lepidopterous larvae. Entomol. Amer. 5:38-39.
"*Agrotis pitychrous* Gr. Head shiny, pale brown, mouth parts pitchy black. Body sordid white, semitranslucent, with three equidistant chalky white stripes along each side, and one along the dorsum. Spiracles black. Cervical shield dirty white. Body below wholly sordid white, semitranslucent. Legs concolorous to the body. Length 36 mm. Feeds on various species of maritime grasses. July." (38)

Beutenmüller, W. 1901. Descriptive catalogue of the noctuidae found within 50 miles of New York City. Bull. Amer. Mus. Nat. Hist., 14:229-312.
The moth, caterpillar, and food plants of the sandhill cutworm, *Carneades* (= *Euxoa*) *detersa* (Wlk.) are discussed. The moth is a pale gray species, common in sandy places, especially near the seashore. It is found during the day on goldenrod and is active in September. (283)

The Canadian Agricultural Insect Pest Review

This publication aims to present, in manuscript form, a periodical statement on current insect pest conditions. It presents data governing the seasonal appearance, the effects of winter, degrees of parasitism, notes on distribution and abundance of insect pests. It has been published by the Canada Department of Agriculture, Research Branch--Scientific Information Section, Ottawa, Ontario, from 1923 to present. From 1923 to 1967, this publication was known as the Canadian Insect Pest Review.

1925. Can. Insect Pest Rev. 3:38.
The cutworm, *Euxoa detersa* var. *personata* Morr., was of considerable economic importance in a field on sandy soil near Saskatoon, Saskatchewan. This was the first encounter with this species.

1933. Can. Insect Pest. Rev. 11:25.
Very light injury to garden peas by *Euxoa personata* (= *detersa*) Morr. also occurred in gardens.

1934. Can. Insect Pest Rev. 12:97.
The species, *Euxoa personata* (= *detersa*) Morr., was quite abundant in light soils at Caradoc, Ontario, attacking corn, strawberries, and melons.

1935. Can. Insect Pest Rev. 13:83, 93, 119.
The cutworm, *Euxoa detersa* var. *personata* Morr., was abundant on onions, potatoes, peas, beans, and clover fields in Middlesex County, Ontario, wherever sandy areas occurred. Cutworms, the majority of which appeared to be *E. messoria* and *E. detersa*, have been injurious to oats at Aweme, Manitoba. (83) *Euxoa detersa* was one of the cutworms causing damage to raspberry plants at Caradoc, Ontario. (93) A field near Souris, Manitoba, was completely infested with *Euxoa detersa*. Turnips and mangels were destroyed at Caradoc, Ontario, by *Euxoa detersa* var. *personata* Morr. (119)

1936. Can. Insect Pest Rev. 14:45, 55, 80.
Euxoa detersa was very abundant and destructive to corn, sweet clover, peas, beans, and raspberries in the Strathroy district of Ontario. (45) A field of oats near Souris, Manitoba, was damaged by *Euxoa detersa* var. *personata* Morr. (55) *Euxoa detersa* was reasonably abundant on sweet clover in Elgin and Middlesex counties, Ontario. Potatoes in Strathroy, Ontario, were infested with *Euxoa detersa*. (80)

1937. Can. Insect Pest Rev. 15:33, 76.
Euxoa detersa was moderately abundant in western Ontario. (33) A fairly heavy infestation of *Euxoa detersa* occurred on potatoes at Strathroy, Ontario. This species appears more or less periodically. (76)

1941. Can. Insect Pest Rev. 19:183.
Occasional larvae of *Euxoa detersa* were found in light loams and sands in the Weyburn area, Saskatchewan, and probably were present in other districts.

1942. Can. Insect Pest Rev. 20:228.
Euxoa detersa var. *personata* was found in tobacco fields in the area around Simcoe and Delhi, Ontario.

1943. Can. Insect Pest Rev. 21:70, 192.
Euxoa detersa occurred in small numbers in Carleton, Saskatchewan. (70) *Euxoa detersa* var. *personata* was one of the cutworms commonly infesting tobacco fields in the Delhi-Simcoe area of Ontario. (192)

1944. Can. Insect Pest Rev. 22:30, 78, 184.
In Ontario, *Euxoa detersa* infested tobacco fields. Damage was generally not severe. (30) *E. detersa* occurred in minor numbers in Saskatchewan. (78) *E. detersa* cutworms were commonly infesting tobacco fields in the Delhi district of Norfolk Co., Ontario. (184)

1945. Can. Insect Pest Rev. 23:26, 77.
Euxoa detersa commonly infested tobacco fields in June and early July in Quebec. (26) *E. detersa* caused little or no damage in Saskatchewan. (77)

1951. Can. Insect Pest Rev. 29:148, 270.
Euxoa detersa occurred on wheat and spring rye in the Floral-Clavet area near Saskatoon, Saskatchewan.

1952. Can. Insect Pest Rev. 30:28.
Euxoa detersa occurred in mixed infestations with the red-backed cutworm (*Euxoa ochrogaster*) in fields of wheat and spring rye in the Floral-Clavet area near Saskatoon, Saskatchewan.

1953. Can. Insect Pest Rev. 31:28, 195.
The sandhill cutworm was notably less abundant in Saskatchewan than the previous year. (28) A survey revealed that the sandhill cutworm was moderately infesting a fall rye field in Floral near Saskatoon, Saskatchewan. (195)

1957. Can. Insect Pest Rev. 35:159.
At Borden, Saskatchewan, larvae of *Euxoa detersa* damaged about 5 percent of one field of wheat and at Shellbrook 10 to 15 percent of three fields of rape.

1958. Can. Insect Pest Rev. 36:31.
Euxoa detersa caused 5 percent damage to a field of wheat at Borden and about 15 percent damage to a crop of rape at Shellbrook, Saskatchewan.

1959. Can. Insect Pest Rev. 37:34.
There were no reports of damage by *Euxoa detersa* in Saskatchewan.

1960. Can. Insect Pest Rev. 38:144, 223, 283.
Euxoa detersa (Wlk.) was present in several fields east of Saskatoon, Saskatchewan. (144) Sandhill cutworms were present in the sandy soil south of Floral and caused 25 percent damage to Durum wheat in one 50-acre field and light damage in a few other fields in the area. (223) *Euxoa detersa* (Wlk.) caused some damage in sandy soil areas south of Floral, Saskatchewan. (283)

1961. Can. Insect Pest Rev. 39:29, 138, 162, 210, 270, 340.
Euxoa detersa (Wlk.) infested a few crops on the sandy soil area south of Floral, Saskatchewan, and one field required reseeding. (29) At Fairground in Norfolk County, Ontario, the unique infestation of a sandhill cutworm, *Euxoa detersa* (Wlk.), which was confined to one field on one farm in 1959 and 1960, was found in all fields on this farm and on five neighboring farms this year. In the originally infested field, as many as nine larvae were found in a 6 sq. in. sample of fall rye before plowing for the current crop of tobacco. It was very evident that the species winters as partly grown larvae. (138) *Euxoa detersa* (Wlk.) has caused serious damage to flue-cured tobacco on sandy knolls in the Fairground area, Norfolk County, Ontario. Infestation was found only on one farm in 1959 and 1960 but this season infestation was found on 10 farms. (162) *Euxoa detersa* (Wlk.), which occurred last year at Fairground, also emerged from the 1961 larval collections but in smaller numbers than the unidentified species. The occurrence of this species is most confusing, as larval feeding habits differ completely from those at Walsh. *E. detersa* begins to emerge about Sept. 1. (210) *E. detersa* was present in small numbers in 1960 but was not reported. (270) *E. detersa*, which appears to be highly tolerant to cyclodiene insecticides, was found on 10 farms in Norfolk County. This cutworm infested only one field on one farm in 1960. (340)

1962. Can. Insect Pest Rev. 40:36, 59, 92, 93, 117, 160, 208, 230.
Most farms within a 5-mile radius of Fairground, Houghton Township, Norfolk County, Ontario, were severely infested by *Euxoa detersa* (Wlk.). In one area of 15 sq. ft., 200 larvae were collected. A few larvae were found near Simcoe, some 21 miles from the main infestation. In 1961, infestations were found within a radius of 2 miles from Fairground. *E. detersa* infested a greater acreage of tobacco than last season, and was not adequately controlled by DDT. (36) *E. detersa* was still feeding on seeds in the Fairground area, Norfolk County, on July 11. No prepupal larvae were found, although most of the larvae in laboratory cultures were in this stage on this date. (59) *E. detersa* occurred in Houghton Township. (92) *E. detersa* was caught in light traps in Fairground, Ontario. (93) In Ontario, *E. detersa* severely damaged flue-cured tobacco. (117) A major outbreak of *E. detersa* occurred on tobacco in Ontario. It has apparently become tolerant to cyclodiene insecticides. (160) *E. detersa* was not reported in 1962. (208) *E. detersa*, which apparently is highly tolerant to cyclodiene insecticides, heavily attacked flue-cured tobacco in about a 5-mile radius of Fairground in Norfolk County, Ontario. (230)

1963. Can. Insect Pest. Rev. 41:45, 127, 154, 199, 220.
Damage to tobacco by *Euxoa detersa* was greatly reduced by preplanting broadcast treatments of DDT in Norfolk County, Ontario. Treated fields, particularly in Houghton Township, were reinfested by larvae from adjacent untreated areas. This cutworm has been very destructive in Houghton Township since about 1960. (45) *Euxoa detersa* was identified from collections from a field of flue-cured tobacco near Delhi, Ontario. (127) *Euxoa detersa* was found on cereal crops in the Saskatoon area of Saskatchewan. In flue-cured tobacco, widespread use of DDT controlled the sandhill cutworm in Norfolk and Elgin counties, Ontario. (154) *Euxoa detersa* (Wlk.) was abundant and caused considerable damage to a few cereal crops on sandy soils in the Saskatoon district of Saskatchewan. (199) Widespread use of DDT reduced injury by *Euxoa detersa* to a minimum in flue-cured tobacco in Norfolk and Elgin counties, Ontario. This cutworm has shown tolerance to cyclodiene insecticides since 1960. (220)

1964. Can. Insect Pest Rev. 42:142, 194.
Damage by *Euxoa detersa* in Norfolk and Elgin counties, Ontario, was less severe than in the preceding year. (142) Infestations of the cyclodiene-tolerant strain of the sandhill cutworm were lighter in flue-cured tobacco soils in Norfolk and Elgin counties, Ontario, in 1964 than in the previous 4 years. (194)

1965. Can. Insect Pest Rev. 43:43, 97, opp. 97 (map), 98, 164, 197, 218, 221.
Euxoa detersa infested a few fields of crops at Saskatoon, Saskatchewan. (43) Populations of the cyclodiene-tolerant strain of *Euxoa detersa* appeared to be light on flue-cured tobacco in Norfolk County, Ontario. (97) A map of the distribution of *Euxoa detersa* in Canada appears opposite page 97. *E. detersa* collected in May and June in Norfolk County, Ontario, were heavily parasitized by *Meteoris leviventris*. (98) *E. detersa* was found in gardens in Saskatoon and Yorkton and on oats in North Battleford, Saskatchewan. (164) *E. detersa* was found in light infestations in fields near Saskatoon, Saskatchewan. (197) *E. detersa* cyclodiene-tolerant strain had been progressively decreasing in numbers in Norfolk County, Ontario, since 1963. (218) *E. detersa* eliminated more than 50 percent of new plantings of strawberries in Norfolk County, Ontario. (221)

Criddle, N. and C. H. Curran. 1922. The entomological record 1922. Entomol. Soc. Ont. Annu. Rep., 53:76-90.
"1272. *Euxoa detersa* Wlk. Lethbridge, Alta. (Seamans)." (77)

Ferguson, D. C. 1954. The lepidoptera of Nova Scotia. Proc. Nova Scotian Inst. Sci., 23(3):162-375.
"1272 *E. detersa* Wlk. Plate V, Figure 4. Walker, 1856. Cat. Lep. Het. Brit. Mus., pt. 9, p. 212. Type locality: Nova Scotia. Cole Harbour, Halifax County, August 31, 1951. (Harrington); Peggy's Cove, Sept. 18, 20, 1952; Aylesford, August 26, 1952; Stellarton, no date. Although described from here, *detersa* seems to be quite rare. In abundance once only, at Petite Riviere, Sept. 4, 1953." (222)

Forbes, W. T. M. 1954. Lepidoptera of New York and neighboring states. Part 3. Noctuidae. Cornell Univ. Agr. Exp. Sta. Mem. 329:1-433.
The moth and the caterpillar of *Euxoa detersa* (Wlk.) are described. (38)

Gauthier, G. and G. Rious. 1945. Preliminary notes on the biology of the species of cutworms attacking tobacco. Quebec Soc. Protect Plants Rep. 29:87-88.
Euxoa detersa (Wlk.) was one of the four principal species studied in Quebec. The flight of the moths occurred from August 21 to Sept. 30. Eggs hatched in the autumn. (88) (Translated from French.)

Gibson, A. 1915. Cutworms and their control. Can. Dep. Agr. Entomol. Branch. 10:1-31.
In Manitoba, the larvae of *Euxoa personata* (= *detersa*) Morr. destroyed plants in vegetable gardens. (31)

Grote, A. R. 1873. Contributions to a knowledge of North American moths. Bull. Buffalo Soc. Nat. Sci. 1:73-200.
A description of the moth of *Agrotis pitychrous* Grote (= *Euxoa detersa*) is given. The moth is illustrated in plate 2, figure 11. The habitat is given as Long Island, New York.

Grote, A. R. 1880. On the synonymy of North American noctuidae. Can. Entomol. 12:1-268.
"*Agrotis personata* Morr., Proc. Bost. Soc. N. H., 238, 1876. This is a dark specimen of *Agrotis pitychrous* previously described by me." (187)

Hampson, G. F. 1903. Catalogue of the Noctuidae in the collection of the British Museum. 4:229.
The author placed *detersa* in the present genus *Euxoa*.

Hart, C. A. 1903. Synopsis of insect collections for distribution to Illinois High Schools. Ill. State Lab. of Nat. Hist., pp. 7-64.
"120. *Paragrotis detersa* Walk. (*Agrotis* or *Carneades pitychrous*). F. cranberry, maritime grasses. I. fall. Larva girdles bark of cranberry at base; adults common in sandy places by day on goldenrod, especially on seashore. Discal spots and space between lines 3 and 4 paler." (32)

Hill, R. E., D. R. Scott, and M. H. Muma. 1949. Sod webworms and cutworms on corn. Neb. Agr. Exp. Sta. Rep. 62:71-72.
"This experiment was designed to test insecticides against the sod webworm, but a heavy infestation of the sandhill cutworm, *Euxoa detersa* (Wlk.), also was encountered. As late as June 22, 12 cutworms per 50 feet of row were recorded."

Hill, R. E. and M. H. Muma. 1951. Chlorinated chemical control of the sandhill cutworm. J. Econ. Entomol., 44:90-92.

The sandhill cutworm, *E. detersa* (Wlk.), frequently is a problem to corn growers who farm the lighter, sandy soils in Nebraska. Heavy infestations and injury occur almost every year in 15 to 20 counties in the north central area of the state. A field test of chlorinated chemicals was conducted in Pierce County during 1948 for the control of the banded webworm and proved to be an excellent control chemical for the sandhill cutworm. (90)

Holland, W. J. 1934. The moth book. A popular guide to a knowledge of the moths of North America. Doubleday, Doran and Co., Inc. 479 pp.
"(7) *Euxoa detersa* Walker, Plate XXII, Fig. 39♂. (The Rubbed Dart.) Syn. *pitychrous* Grote; *personata* Morrison. A pale and inconspicuously colored insect which has the same distribution as the two preceding species." (188)

Knutson, H. 1944. Minnesota Phalaenidae (Noctuidae). The seasonal history and economic importance of the more common and destructive species. Minn. Agr. Exp. Sta. Tech. Bull. 165:1-128.
Museum specimens examined, rearing data and larval collections, seasonal history, and economic importance of the sandhill cutworm are discussed. (17)

Leonard, M. D. 1928. A list of the insects of New York. Cornell Univ. Agr. Exp. Sta. Mem. 101:1-1121.
"1272 *E. detersa* Wlk. (*pitychrous* Grt.). Plattsburg; Peru; Fentons; Buffalo; Schenectady; Karner; Albany; SI; general on LI. This species favors sandy country. Late Aug.-Oct." (663)

Moore, S. 1955. An annotated list of the moths of Michigan exclusive of *Tineoidea* (Lepidoptera). Univ. Mich. Misc. Pub. 88:1-87.
Michigan county records of *Euxoa detersa* are given. (14)

Morrison, H. K. 1876. Descriptions of new North American Noctuidae. Proc. Boston Soc. Nat. Hist. 18:237-242.
Agrotis personata was not considered a variety of *Agrotis pitychrous*. The adult *personata* was described. (238-239)

Muma, M. H. and R. E. Hill. 1950. Cutworm control. Neb. Agr. Exp. Sta. Rep. 63:82.
Insecticidal tests conducted in 1948 showed that DDT soil treatment was effective in reducing injury to corn by *Euxoa detersa* (Wlk.).

Prescott, R. T. 1939. Fifty years achievement in agricultural investigation. Neb. Agr. Exp. Sta. Circ. 60:1-79.
"Cutworms of many species have for many years taken a heavy toll of Nebraska crops. Especially in the lighter soils in northeastern Nebraska, the sandhill cutworm (*Euxoa detersa*) and other species have been persistently destructive for the past 20 years or more." (49)

Ross, W. A. and L. Caesar. 1931. Insects of the season 1931 in Ontario. Entomol. Soc. Ont. Annu. Rep. 62:7-14.
The sandhill cutworm was one of the cutworms found to be exceptionally abundant and destructive in the Niagara peninsula and southwestern regions. Among the plants attacked were raspberries, young grape vines, and apple trees. In the Ottawa district, cutworms were not particularly injurious. (10)

Smith, J. B. 1893. Catalogue of the lepidopterous superfamily Noctuidae found in boreal America. Bull. U. S. Nat. Mus. 44:1-424.
Five references for the sandhill cutworm are given and habitats are discussed. (94)

Smith, J. B. 1899. Insects of New Jersey. A list of the species occurring in New Jersey, with notes on those of economic importance. Suppl. 27th Annu. Rep. State Bd. Agr., p. 410.
"*C. detersa* Wlk. = *pityochrous* Grt. Throughout the state; but especially common near the shore on goldenrod late in fall, flying in the bright sunlight."

Strecker, H. 1898. Rhopalocera et Heterocera indigenous and exotic. Suppl. I. Reading, Pa.
The author described the sandhill cutworm as *Agrotis azif*. (6)

Tietz, H. M. 1951. The lepidoptera of Pennsylvania. A manual. Pa. Agr. Exp. Sta., pp. 1-194.
1272 *detersa* (Wlk.). References, synonomy, distribution, life history, and food plants are given for the sandhill cutworm. (49)

Tietz, H. M. 1972. An index to the described life histories, early stages, and hosts of the macrolepidoptera of the continental United States and Canada. Allyn Mus. of Entomol., Sarasota, Fla. 1041 pp.
This two-volume work lists the approved common names of moths and butterflies, a bibliography and host range for each species, as well as a short synonomy of the scientific names of the species. The last section lists the scientific and common names of plant hosts and then lists the lepidoptera which have been reported to feed upon these hosts. (238)

United States Department of Agriculture Cooperative Economic Insect Report[1]

The Bureau of Entomology of the U. S. Department of Agriculture, in cooperation with the State Entomologists, Entomologists of the Agricultural Experiment Stations, State Departments of Agriculture, Agricultural Colleges, and other entomological agencies, organized an Insect Pest Survey in 1921. This survey attempted to assemble and disseminate all data on the distribution, seasonal and regional fluctuations of insect abundance, weather data as related to insect outbreaks, phenological data, and other miscellaneous information. Each year an annual digest of the important facts gathered during the past season was published in the form of Insect Pest Summaries.

From 1921 to 1950, this publication was entitled "The Insect Pest Survey Bulletin." This was not bound or indexed for the years 1942-1949. In 1951, the Bulletin was replaced by the "Cooperative Economic Insect Report," Vol. 1, No. 1, July 31, 1951. No explanation is given in this publication for the name change.

1930. U. S. Dep. Agr. Insect Pest Surv. 10:203.
The first planting of corn was seriously damaged in several counties of northeastern Nebraska by two or three species of cutworms. The species most numerous in sandy soils was *Euxoa detersa* (Wlk.).

1954. Coop. Econ. Insect Rep. 4:507.
In Nebraska, cutworms, probably *Euxoa detersa*, have caused 30 percent or more loss in corn on sandy soil of Logan County and some surrounding areas.

[1] Issued by Plant Protection and Quarantine Programs, Animal and Plant Health Inspection Service, U. S. Department of Agriculture.

1955. Coop. Econ. Insect Rep. 5:31, 638.
In Logan County, Nebraska, cutworms, probably *Euxoa detersa*, caused 30 percent or more loss in cornfields and portions of surrounding areas. (31) A cutworm, *Euxoa detersa*, was causing damage to corn grown on sandy soil in Pierce County, Nebraska. (638)

1956. Coop. Econ. Insect Rep. 6:27, 545, 606.
A cutworm, *Euxoa detersa*, damaged corn on sandy soil in Pierce County, Nebraska. (27) There were severe infestations of *Euxoa detersa* in sandy cornfields in the northeastern area of Nebraska. Some entire fields were destroyed. (545) *Euxoa detersa* infestations continued to be severe in northeastern Nebraska. (606)

1957. Coop. Econ. Insect Rep. 7:98, 528.
A cutworm, *Euxoa detersa*, caused severe damage to corn on soil in the northeastern area of Nebraska. (98) In Nebraska, infestations of *Euxoa detersa* were light and spotty in corn in several counties. (528)

1958. Coop. Econ. Insect Rep. 8:113.
In Nebraska, the sandhill cutworm, *Euxoa detersa*, occurred in light infestations on corn.

1962. Coop. Econ. Insect Rep. 12:1175.
In Ontario, *Euxoa detersa* caused severe damage to flue-cured tobacco.

1967. Coop. Econ. Insect Rep. 17:531.
In Nebraska, *Euxoa detersa* damaged corn.

1968. Coop. Econ. Insect Rep. 18:486.
Euxoa detersa damaged corn in Antelope County, Nebraska.

1969. Coop. Econ. Insect Rep. 19:133.
Euxoa detersa larvae damaged corn seedlings in two northeastern counties of Nebraska.

1970. Coop. Econ. Insect Rep. 20:382.
Euxoa detersa damaged corn in Nebraska.

1971. Coop. Econ. Insect Rep. 21:147.
In Nebraska, damage to corn by *Euxoa detersa* was light compared to that of 1969.

1972. Coop. Econ. Insect Rep. 22:330.
Euxoa detersa larvae destroyed about 35-40 percent of the stand in a 160-acre cornfield north of Meadow Grove, Pierce County, Nebraska.

Walkden, H. H. 1950. Cutworms, armyworms, and related species attacking cereal and forage crops in the Central Great Plains. U. S. Dep. Agr. Circ. 849:1-52.
Distribution, economic status, food plants, seasonal history, and natural enemies of *Euxoa detersa* are discussed. (18)

Walker, F. 1856. List of the specimens of lepidopterous insects in the collection of the British Museum. Part IX. - Noctuidae: 212.
This is the author's original description of the species. Both the male and female moths are described. The type specimens were from Lt. Redman's collection and were collected in Nova Scotia.

Whelan, D. B. 1935. A key to the Nebraska cutworms and armyworms that attack corn. Neb. Agr. Exp. Sta. Res. Bull. 81:1-27.
The description, distribution, seasonal abundance, habits, and food plants of the sandhill cutworm, *Euxoa detersa* (Wlk.), are discussed. (13)

Whelan, D. B. 1938. Blood pulsations in *Euxoa detersa* (Walker). J. Kansas Entomol. Soc. 11(3):109.
Because of the unpigmented condition of the skin, the cutworm *Euxoa detersa* (Wlk.) offers a good opportunity for studying the pulsations of the dorsal blood vessel. A table containing the record of pulsations is given.

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This index was prepared on the computer from keywords indicated on the index card file. Information may be retrieved by author's name (left-hand column) and year (right-hand column); by host plant, by geographical locality and by subject, *i.e.*, larval description, life history, outbreak, geographical distribution, etc. The Canadian Insect Pest Review is abbreviated as CIPR, the Insect Pest Survey as IPS, and the Cooperative Economic Insect Report as CEIR.

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